REMARKS

This is intended as a full and complete response to the Office Action dated April 29, 2008, having a shortened statutory period for response set to expire on July 29, 2008. Please reconsider the claims pending in the application for reasons discussed below.

Claims 2-6, 10-29, 35, 37, and 40-45 remain pending in the application and are shown above. Claims 1, 7-9, 30-34, 36, 38-39 and 46 are cancelled by Applicant. Claims 1-9, 13-20, 30-34, 36, 38, and 42 are rejected by the Examiner. Claims 10-12, 21-29, 35, 37, 40 and 41 are objected to by the Examiner as being dependent upon a rejected base claim, but the Examiner indicated they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 10-12, 21-26, 35, and 37 are so amended. Applicant respectfully submits that pending claims 27 and 40-41 are already presented in independent form. Applicant requests withdrawal of the objection with respect to claims 27 and claims 28-29 dependent thereon and claims 40-41. Claims 2-6 have been amended to clarify certain aspects of the invention. Claims 13-14, 27, and 40-42 are amended to correct matters of form. Reconsideration of the rejected claims is requested for reasons presented below.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 2, 4-6, 30 and 38 rejected under 35 U.S.C. § 102(d) as being anticipated by *Nishinakayama et al.* (U.S. Patent No. 6,510,365). Applicant has cancelled claim 1, 30, and 38. Applicant respectfully traverses the rejection with respect to amended claim 2 and amended claims 4-6.

Nishinakayama et al. teach inputting coordinates of an expected substrate transfer position based on calculated design data into a robot controller. A substrate is then manually transferred from the robot positioned in a transfer chamber to a susceptor in a processing chamber, during which the center of the substrate is manually aligned with the

center of the susceptor. The difference between the expected substrate transfer position and the position of the substrate manually placed on the susceptor is determined and programmed into the controller.

Nishinakayama et al. do not teach monitoring a condition within a processing system by sensing a change in state of a portion of the processing system through which the robot must extend to reach an exchange position.

Therefore, *Nishinakayama et al.* do not teach, show, or suggest teaching the robot to move to an exchange position defined in the processing system, monitoring a condition within the processing system by sensing a change in state of a portion of the processing system through which the robot must extend to reach the exchange position, determining a shift in the exchange position based on the monitored condition, and correcting motion of the robot to compensate for a shift in the exchange position as recited in amended claim 2 and claims 3-6 and 15-20 dependent thereon. Applicant respectfully requests withdrawal of the rejection.

Claim Rejections – 35 U.S.C. § 103

Claims 3, 7-9, 31, 36 and 42-45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nishinakayama et al.* (U.S. Patent No. 6,510,365) in view of *Storm et al.* (U.S. Patent No. 6,746,237). Applicant has canceled claims 7-9, 31, and 36. Applicant respectfully traverses the rejection with respect to amended claim 3 and claims 42-45.

Regarding claim 3, the deficiencies of *Nishinakayama et al.* with respect to amended base claim 2 are discussed above. *Storm et al.* teach a furnace for heat treating substrates. The furnace includes a temperature sensor disposed therein and linked to a controller for closed-loop control of the power supplied to the furnace's heating element.

Storm et al. also do not teach or suggest monitoring a condition within a processing system by sensing a change in state of a portion of the processing system through which the robot must extend to reach an exchange position.

Therefore, *Nishinakayama et al.* and *Storm et al.*, alone or in combination, do not teach, show, or suggest teaching a robot to move to an exchange position defined in the processing system, monitoring a condition within the processing system by sensing a change in state of a portion of the processing system through which the robot must extend to reach the exchange position, determining a shift in the exchange position based on the monitored condition, and correcting motion of the robot to compensate for a shift in the exchange position as recited in amended claim 2 and claims 3-6 and 15-20 dependent thereon. Applicant respectfully requests withdrawal of the rejection.

Regarding claims 42-45, the Examiner states that *Nishinakayama et al.* teach all of the elements and limitations of base claim 42 except a sensor adapted to provide a temperature metric from which a change in position between the transfer chamber and the processing chamber may be resolved and a controller adapted to provide instructions for correcting the robot's motions in response to the metric provided by the sensor. The Examiner states that *Storm et al.* teach a furnace with a temperature sensor. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to combine the method of *Nishinakayama et al.* with *Storm et al.*'s teaching of a temperature sensor to achieve the claimed invention. Applicant respectfully submits that the Examiner errs in this assertion.

Nishinakayama et al. teach inputting coordinates of an expected substrate transfer position based on calculated design data. A substrate is then manually transferred from a robot positioned in a transfer chamber to a susceptor in a processing chamber, during which the center of the substrate is manually aligned with the center of the susceptor. The difference between the expected substrate transfer position and the position of the

substrate manually placed on the susceptor is determined and programmed into the controller.

Storm et al. teach a furnace for heat treating substrates. The furnace includes a temperature sensor disposed therein and linked to a controller for closed-loop control of the power supplied to the furnace's heating element.

Nishinakayama et al. and *Storm et al.*, alone or in combination, fail to teach, show, or suggest at least one sensor adapted to provide a temperature metric from which a change in position between the transfer chamber and the processing chamber may be resolved and a controller coupled to the robot and adapted to provide instructions for correcting the robot's motions in response to the metric provided by the at least one sensor.

Therefore, *Nishinakayama et al.* and *Storm et al.*, alone or in combination, fail to teach, show, or suggest a substrate processing system comprising a transfer chamber, a processing chamber coupled to the transfer chamber, a robot disposed in the transfer chamber and adapted to transfer substrates between the transfer chamber and the processing chamber, at least one sensor adapted to provide a temperature metric from which a change in position between the transfer chamber and the processing chamber may be resolved, and a controller coupled to the robot and adapted to provide instructions for correcting the robot's motions in response to the metric provided by the at least one sensor as recited in claim 42 and claims 43-45 dependent thereon. Applicant respectfully requests withdrawal of the rejection.

Claims 13 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nishinakayama et al.* (U.S. Patent No. 6,510,365) in view of *Pryor* (U.S. Patent No. 6,314,631). Applicant respectfully traverses the rejection.

Both claims 13 and 14 depend from claim 12, which the Examiner objected to as being dependent upon a rejected claim. Applicant has amended claim 12 into independent form incorporating all of the elements and limitations of its base claim. Therefore, Applicant submits that claims 13 and 14 are allowable as depending from allowable claim 12.

Claims 15-20 and 32-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nishinakayama et al.* (U.S. Patent No. 6,510,365) in view of *Brown et al.* (U.S. Patent No. 6,689,519). Applicant has canceled claims 32-34. Applicant respectfully traverses the rejection with respect to claims 15-20.

The deficiencies of *Nishinakayama et al.* are discussed above with respect to amended base claim 2. *Brown et al.* teach a controller computer configured to use an experimentally determined or a numerically simulated relationship between a property and a parameter to determine another parameter in response to the property.

Brown et al. also fail to teach monitoring a condition within a processing system by sensing a change in state of a portion of the processing system through which the robot must extend to reach an exchange position.

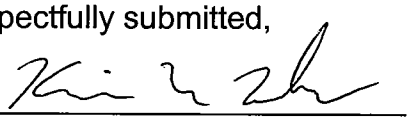
Therefore, *Nishinakayama et al.* and *Brown et al.*, alone or in combination, fail to teach, show, or suggest teaching the robot to move to an exchange position defined in the processing system, monitoring a condition within the processing system by sensing a change in state of a portion of the processing system through which the robot must extend to reach the exchange position, determining a shift in the exchange position based on the monitored condition, and correcting motion of the robot to compensate for a shift in the exchange position as recited in amended claim 2 and claims 3-6 and 15-20 dependent thereon. Applicant respectfully requests withdrawal of the rejection.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

By 

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